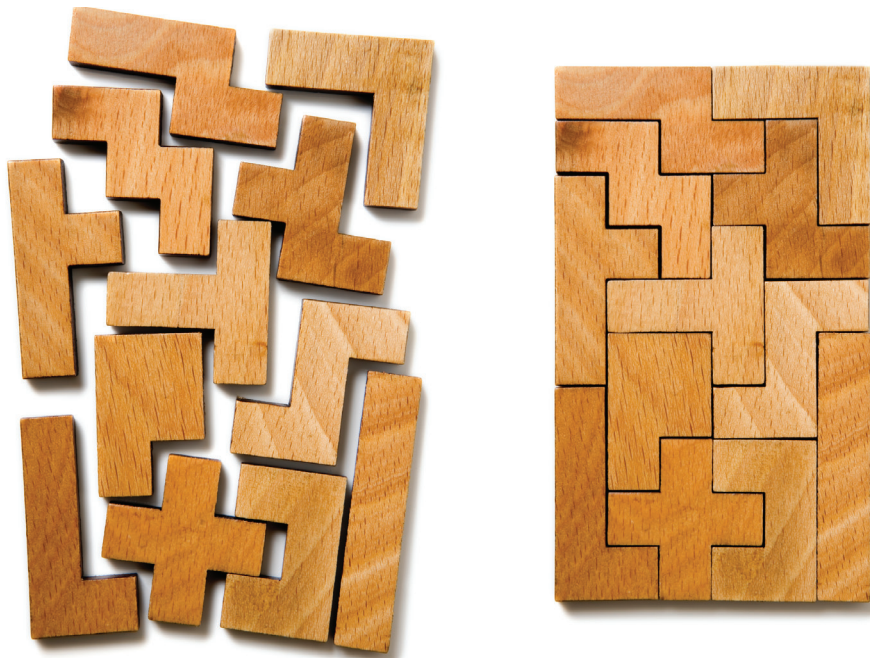


DISRUPTIVE INNOVATION IN INTEGRATED CARE DELIVERY SYSTEMS

By Vineeta Vijayaraghavan



INTRODUCTION

What defines a high-performing health system? Over the years, with the recognition that health care spending was on an unsustainable trajectory, the definition has increasingly shifted to incorporate value and affordability as essential qualities of our top health care institutions.

More recently, as we tracked the debate surrounding the Patient Protection and Affordable Care Act and followed discussions about how to implement accountable care organizations, we took note of a growing phenomenon—that many of the organizations suggested as models for the rest of the nation’s health care fell into the category we had previously described as “integrated, fixed-fee providers.”¹ These health systems combined the functions of both payor and provider, and we postulated their realigned incentives would lead them to introduce disruptive, high-value models of health care that non-integrated systems simply could not.

Yet the picture was not so clear-cut. While it was true that a handful of integrated health systems were decisively outpacing their peers across nearly all quality and cost measures, attempts to expand or replicate them in new markets had often failed. Furthermore, even

within the category of integrated health systems, the range of performance varied widely, with some lagging far behind despite possessing what seemed to be the key ingredients for success.

There are a variety of explanations for why only some integrated systems have risen to the top—many of them unsatisfying, seemingly incomplete, or sometimes even contradictory. Is it culture? The history or leadership of the organization? The unique community it serves? The size of the health system? Identifying the “secret sauce” that under-pins the success of these few health systems is essential to ensuring that similar organizations can be cultivated elsewhere and that one day every American will be able to access high quality, affordable care.

This case study series attempted to do exactly that. We employed a case-based investigation to uncover how integrated systems appear to think, act, and innovate differently. Seven health systems were selected to represent different points across the spectrum of integration, while also reflecting the diverse characteristics of this category of health systems.

In the end, we found very different histories and pathways to integration, unique cultures and missions,

and divergent organization sizes and communities. Yet we also discovered a multitude of innovations that shared a similar underlying rationale, which led very different health systems down a common path. In several instances, we found the unexpected, both encouraging and disappointing. Thus, you will find this summary paper organized into three sections: 1) What we expected to find, 2) What we found but did not expect, and 3) What we expected but did not find.

Our major observations and findings include:

- Documenting best practices in the use of electronic health records and health IT that should be implemented across all health systems as stimulus funds promote their widespread adoption
- Validating the importance of expanding the scopes of practice of various clinical staff, including nurse practitioners and physician assistants, to ensure access to quality care through disruptive delivery models
- Detailing the patient experience within these integrated care delivery systems, where patients typically received more care—not less—in contrast to the managed care organizations of the 1990s
- Highlighting and assessing the relative success of innovations already underway at multiple integrated systems, which may be incorporated into today's ongoing integration efforts, including mergers, accountable care organizations, and virtual assemblages being formed to participate in bundled payment programs and pay-for-performance contracts

In summary, readers will discover that many elements of our future health care system are already in place, scattered across the country, but catalogued and documented here through face-to-face conversations with those directly responsible for those innovations.

This paper is the culmination of nearly two years of work in partnership with the Pioneer Portfolio and our eminent case study subjects, and though it contains some of our most important conclusions, it cannot replace the depth of information embedded in the seven case studies. I encourage you to read each of them to gain a more complete picture of what it takes to be a high-performing health system in the 21st century.

Jason Hwang, M.D., M.B.A.
Executive Director of Healthcare,
Innosight Institute

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Part I: What we expected to find

Robust health care IT was a prerequisite for integration and performance.

All of the seven health systems in our study have made major commitments to health care IT. Most of them are able to do claims and care delivery documentation in a single Epic-based system. Having that data infrastructure in place is critical for several reasons. First, it is easier to be rigorous in quality reporting and evaluations of physicians by using software to scan all data and patient incidences than it is to spot-check paper charts or claims data, as was initially the case at many institutions. This builds credibility with the physicians as well as with employers that the data they are looking at is fair and representative.

Second, new issues that have previously been unable to be identified can be studied and solved. Data mining and population health surveillance can highlight issues that were previously under the radar, such as co-morbidities, correlations with age or ethnicity, or a pattern of prior treatment. This creates

a loop of analysis, piloting solutions and tracking data on their effectiveness that would be onerous to do anywhere without effective IT. Kaiser Permanente used such large-scale analysis in 2005 to first identify heart attack risk associated with the Cox-2 inhibitor Bextra. While not all of our integrated delivery systems (IDS) are maximizing this second element, integrated delivery systems are in the optimal position to undertake this. Third, IT enables new types of coordination that can make care seamless between hospitals, outpatient settings, home health, etc. The ultimate level of coordination is that patients can send in results from home monitoring devices and interact with their care providers without even leaving their home, and care teams can escalate issues to the doctor that require additional advising or an office visit. In this way, IT improves effectiveness of integration and lowers cost of care. All these elements point to an underlying

message. As other health systems catch up and use stimulus funds for health care IT, it is not enough to simply build a system that will serve as a replacement for file cabinets and archives. The information

system must be used differently to really impact quality; it must be used to evaluate and solve problems and to experiment with, coordinate, and deliver care.

We expected to see some cost differences, and we did see some, but not to the degree we had hoped.

Of all of the systems we studied, Minnesota's HealthPartners (HP) had the most data to substantiate the hypothesis that integrated care delivery is less costly at equal or greater levels of quality. The state of Minnesota averages costs that are 30% below the national average, and HealthPartners' costs are another 8% lower than the state's average. They attribute most of these savings to clinical practice patterns and adherence to evidence-based medicine. Outside of our study, there are some indications that integration can achieve substantial cost benefits. For example, our correspondence with Geisinger suggests that they are achieving costs approximately 30% below local insurance costs. Conversations we had with Qliance, a prepaid primary care medical practice (and not an integrated delivery system in that they are not at risk for full health insurance, only primary care) also indicated lower health care cost trends through reduced need for secondary and tertiary care.

Within our own study, however, the financial benefits of integration were not very dramatic. Group Health (GH) in Puget Sound had recently made big investments in Medical Home that they hope to see financial benefits from within the next calendar year in the range of 5% below their local market's cost of care. In earlier decades, Grand Valley Health Plan (GVH) was able to achieve a 5–10% lower cost of care than its local providers and insurers in Michigan, but in the hard-hit state economy of recent years, they are struggling to maintain the minimum membership to cover their overhead. Other providers such as Presbyterian, Baystate, Sentara, and Lancaster do not have a product that offers a “closed network” where these cost differences can be demonstrated. In cases where cost of inpatient care is lower than the national average (as with Presbyterian and Lancaster), the below-average cost is attributable, not to integration, but rather to the local clinical practices and

reduced likelihood of practicing excess or redundant medicine.

The reasons for not achieving cost savings or more substantial savings are complex and varied. One major reason is that health systems are still beholden to local wages and other inputs. In some cases, a physician may have accepted a lower market-based salary for the security of employment in an integrated system, but any reduction in pay cannot be large or else it will be difficult to attract physicians. Professional standards and regulations are the same as for other health care providers, providing an example of how regulations incur hidden costs by

stunting innovation. We also witnessed widespread pressure to provide newer technologies, devices, and services that were often unproven. Preference sensitivity was often ascribed to patients, but we encountered preference sensitivity exhibited by both patients and providers, and the demand for gadgets—from both sides—keep costs high. While it is beyond the scope of this paper, additional research should estimate the value of educating both patients and providers

about the real differences between different devices and procedures, and what the comparative effectiveness programs might achieve if implemented correctly.

Some systems have fought regulations on who can perform what health service, so as to increase the scope of practice that other staff, such as an advanced practicing nurse, for example, can provide. Integrated delivery systems are more proactive about looking for opportunities

to enable up-skilling, where nurses can do some of what physicians can do, and primary care can do some of what specialists often do. The Institute of Medicine called for such expanded scope of

“Integrated health systems are still beholden to local wages and other inputs.”

practice in their 2010 report on the future of nursing. This type of skills transfer and enrichment of human capital is critical to long-term cost reduction. However, the catch-22 is that IDSs do not want to be perceived as being “inferior” to traditional FFS health services, so they are often insisting that everything is “the same,” e.g., you can still come in to see your doctor as often as you like without financial consequences, even though it might not be necessary given the preventive care

provided, the care team's involvement, and your doctor's accessibility over phone and email.

On the insurance side, in states like Washington (Group Health's location) and Michigan (where Grand Valley is), state insurance policies of adjusted community rating mean that it has not always made sense to offer a lower-priced product. We did see real practice differences that would lead to lower costs, but underlying cost of care and pricing, though usually correlated, are still distinct. As Group Health's Erik Larson noted, "On the insurance side, Group Health aligns its price structure with those of competitors because in the

absence of insurance-market reform, not doing so would put it in an unsustainable, disadvantaged position of attracting sicker, higher-risk patients." This contrasts with Kaiser, which successfully markets lower-priced products in the California market, which is not beholden to adjusted community rating. The health systems, by and large, believed adjusted community rating should continue, but hoped that the Patient Protection and Affordable Care Act (PPACA) would lead the insurance pool to include everyone, though they feared that penalties are still not strong enough to guarantee universal sign-up.

A strong culture is necessary but not sufficient.

A strong culture does not drive a health system towards what we would consider disruptive innovation unless the culture unifies around focusing on disruptive innovation, or the three-fold aim of cost, quality, and access. Culture can otherwise be an obstacle anchoring an organization to how they have always done things—e.g., a family practice physician who insists on seeing their own patient instead of sending the patient to a midlevel employee.

If a system is not focused on actively lowering their cost of care, two other

lesser, but quite effective, drivers of performance are to focus on community or on quality/safety. Both of these focuses lead hospitals to do many of the "right things" that would be economically aligned in an integrated system; despite this lack of alignment, non-integrated systems do them to achieve non-economic goals. Therefore, we see Lancaster invest in a phenomenal wellness staff of 50 people employed on the hospital's payroll because this is part of their commitment to public health in their county. We see Sentara target and achieve infection

control levels that put them in the top 5% of the country, though this does not intrinsically benefit them financially (as it would if those patients whose illnesses they had prevented were in an integrated insurance product). In multiple health systems, we noted that a culture of safety was often jumpstarted by highlighting the consequences for patient health and mortality. A focus on safety then often led to a broader focus on quality, which then was backed up by changed incentives. Only after all this was in place could other care guidelines be implemented that were more about changing workflow or systematizing approaches. The latter would have been perceived as tedious or unimportant if rolled out earlier, but the

acceptance level and the belief in measuring and consistency were solidly in place by the time they did get introduced.

We would also include as a “cultural factor” the status of the organization in terms of being a non-profit or a cooperative. Our conversations led us to believe that faith-based systems often have a supportive cultural factor in place as well, though we did not have a faith-based system as part of our study. While these supportive factors can help build a culture of accountability or patient-centered care delivery, by themselves, they would NOT lead institutions to be more disruptive or more successful in terms of overall performance.

Scarcity is often the mother of disruptive innovation.

At Presbyterian Health System, many primary care doctors consult by telephone with specialists in the rural areas, since sending a patient onto a specialist would require either a lot of travel or long wait times as the specialists have backlogs of work. This means the specialists are open to conceding revenue as they cannot see any more patients and also recognize the critical health need. Similarly, “Hospital at Home” is being discussed for rollout at Lancaster, even if that would seem

disruptive to hospital revenue, because the hospital is often at capacity, so there is pressure to free up beds. Under conditions of scarcity, there is less of a revenue threat; there is also the agreement that “good enough” is better than nothing. In contrast, recent attempts to loosen California regulations to allow nurse anesthetists to operate without anesthesiologists led to a head-on battle. It is an important nuance to know how to pick your battles when advancing disruptive

innovation. Once there is proof of concept in the market under conditions of scarcity, then the innovation can get better over time so that it is quite good, not just good enough, and truly has the potential to disrupt the existing revenue streams, even in markets with dominant, entrenched actors. We hypothesize that safety net hospitals are often good platforms for disruptive innovation, as it is in their self-interest to keep people out of the hospital

because there are often scarce resources and insufficient reimbursement for services. We also hypothesize that health plans that have been managing Medicare Advantage would be well positioned to extend into integrated delivery products or partnerships, as they have focused on managing cost and maintaining health for a capitated sum and should know how to do that well.

There is still a strong anti-integration residue from the HMO implosions in the 1990s. A better job needs to be done in explaining the value proposition of integration, sharing results, and spreading the word.

This is not your mother's HMO. A closed network product at the health systems we studied is far from the "bare bones" product marketed in the '90s. The closed network products at Group Health, HealthPartners and Grand Valley are more like luxury goods. The paradox is that patients feel there must be a substantial "discount," or cost savings, to entice them to join an HMO rather than an open Point of Service plan (POS), yet the HMO can deliver much better care and coordination with a closely vetted list of doctors. Group Health mentioned that when they have patients with real mental health crises, they try to make sure those

patients stay in-network because they get better health results with the coordination and quality that the in-network caregivers provide. HealthPartners mentioned that their patients with chronic conditions are the ones who give them the highest customer satisfaction ratings. Only the really sick can see what differentiates integrated care. In this climate where patients want financial savings to entice them to sign up for a closed product, it is notable that the amount of financial savings no longer has to be very much in a recessionary economy—where before it might have had to be 10% or more, now, even 3–5% is attracting customers,

according to Group Health. That might give Group Health and others an opportunity to get a foot in the door with customers and employers and prove themselves.

Most of these health system leaders felt that the failed HMOs in the '90s had crammed risk onto doctors without any tools or information to effectively document or measure quality or risk. The historical impact of those implosions still makes many providers, insurers, employers, and consumers gun-shy, even 10–15 years later.

This affects the willingness of hospitals, and doctors, to move down that path, even though the information and

tools available now have made enormous advances in terms of being able to assess, and adjust for, the severity of illness, the demographic profile of patients, the prior success rates of the physician, the historic cost of care, or the likelihood of side effects or readmissions for various procedures. If attempting to build physician and hospital willingness to share risk, the emphasis must be first and foremost on quality of information and quality of patient care, and only then about cost and disciplined resource use. With patients, the emphasis must be first and

foremost on quality of patient care; what capitation still means to many patients is that there will be extensive gate-keeping, and if they manage to get through the gates, they are seeing a second-rate set of doctors. We need to paint patients a picture of what the benefits of integration are. Integration can mean *more* care, not less. As Grand Valley nurses joked, “We will chase you down to make sure you come in if you are a diabetic or a heart patient that has missed a check-up.” It can mean extra access to your doctor and

“Integration can mean *more* care, not less.”

your care team—Group Health estimates total touch points are 5–7 times a year for their patients and that email and telephone interac-

tions have come on top of maintaining a similar level of office visits per patient. It can mean better quality: the in-network doctors at HealthPartners have had to prove themselves to be in the top tier of quality results for that procedure or specialty. It can mean *more* convenience and better technology—being able to upload home monitoring results to your doctor, contact him by email, and get test results sent home before you even arrive there (Group Health). It can mean truly coordinated care, where specialists for *every* visit write letters back to your

primary care provider that show up in your electronic file and you do not have to carry paper records between doctors or repeat tests because they cannot find your results, do not trust other doctors' interpretations, or are incented to make the extra income (Grand Valley). It can mean a patient guide, rather than the sick patient or overburdened relative, doing the research to find local vendors for safety rails when a patient goes home from the hospital and advising on appropriate installation to lower the likelihood of falls. The new brand messaging needs to convey that integration is what leads to quality and value. This ultimately should matter much more than "choice" or small premium pricing differentials. You will get better care than you have now, and it may or may not cost you less, but it will not cost you more.

Part II: What we found but did not expect

You do not need to own hospitals to operate an IDS, and in some situations, you may be better off not owning one.

Group Health and Grand Valley both operate IDSs without owning hospitals. Group Health, which had owned three hospitals until the mid-1990s, deliberately got out of the hospital business. There was sufficient bed capacity in their market and they were able to find hospital partners open to signing long-term contracts and partnering collaboratively. Group Health did continue to employ specialists since they felt that, without them, they would not have sufficient control over costs and practice approaches. Grand Valley does not own a hospital and only employs specialists on a per diem basis. They have not had partnerships as productive as Group Health's in their much smaller local market, but rather than feel locked in by local pricing and services, they are actually practicing "medical tourism" within the United States, sending their patients to centers of excellence like Cleveland Clinic or St. Jude's hospital for children. In some cases, they have found world-renowned hospital partners who have a higher frequency of performing specialized procedures or offer bundled pricing

or quality guarantees at a lower cost than in their own market (including travel for the patient and their family). It is also worth noting that, even as big a hospital as Kaiser is, it also does not try to do everything for everybody, and finds that it makes sense in some cases to refer out to other partners for efficient and effective treatment. We suggest the analogy that the decision to own a hospital might be similar to the decision of whether it is better to own or rent a home. If you own the hospital, you are basically your own landlord and can make decisions about long-term investment in the facility and overall standards. However, for tenants who have a constructive relationship with their landlord, and where there is sufficient capacity in their market that rents are not too volatile, it might be a relief to not have to worry about overhead and managing real estate.

Both Grand Valley and Group Health felt that if they owned a hospital, then they would be motivated to fill it, suddenly worrying about keeping beds full and maximizing revenues from the hospital. Instead, both systems can be

aligned around cost containment issues and avoidance of hospitalizations and unnecessary procedures. HealthPartners does own a hospital, but leadership mostly thinks of it as a cost center. Because it had been a safety net hospital, they had already thought of how to minimize admissions or do more with less, and they do not see their hospital ownership as a driver of additional revenue. When a system owns the dominant hospital in its market, as Presbyterian Health System does with Presbyterian Hospital, the branding effect can add trust and credibility to a health plan operating under the same name. However, in both Sentara's and Baystate's markets, where its hospitals are the dominant players, the health systems perceived that others would see their health plans as part of a monopoly or somehow operating with an unfair advantage, so their health plans have names and brand identities separate and distinct from the names of their hospitals/umbrella health system.

For systems where hospital revenue has accounted for more than half of the system's total revenue, it can be very

threatening and confusing to aim for goals that include minimizing admissions, invasive care, and need for specialist intervention. In one system, an executive described a board-level strategy meeting where executives from the health plan subsidiary presented plans to lower ER usage, then were followed by hospital executives presenting on how to maximize ER revenues. In some cases, systems are preparing for a future of health care cost control that may reduce revenue per patient, but the hospital-dominated ones acknowledge they are hoping to "backfill" revenue with additional patients in their geography, by expanding into lucrative, elective services paid out of pocket, and depending on the aging of the population to increase their usage. It requires enormous leadership effort to shift the mindset that sees a hospital as a revenue center to a mindset that sees it as a cost center and to create the desire for change. One CEO did this by testing extreme scenarios for changes in payment—he asked all service lines to assume their prices dropped by 30% and to see what was still sustainable and worth investing in.

It is viable to run a very small IDS of under 20,000 members.

Consultants had told the largest health system we saw, Group Health, which

has 600,000 members, that they needed at least 1 million members to be at an

effective scale. This question of effective scale, however, really breaks down to how large of a geographic footprint a health system is trying to operate in, what capacity it has built, and how much it needs to “feed the beast.” The smallest health system we saw, Grand Valley, had run a profitable and thriving operation at 15–20,000 members. Largely due to broader economic conditions and the diminishment of its employed and insured base, Grand Valley’s membership number has now fallen below what would be viable, and is now at 8,000 members. Though some volatility still exists at the 15–20,000-member level, risk can be

minimized by purchasing reinsurance to cover the exceptionally expensive cases. The step function increases in membership are required as a system makes the decision to employ specialists, own hospitals, or expand its geography. Risk tolerance is also a factor as Grand Valley is the only for-profit we studied, and their private investors seemed willing to accept the increased risk of their small size. This may have been considerably harder for non-profits to do, as they borrow debt and want more stable financial flows to maintain high bond ratings to keep the cost of capital manageable.

There are not a lot of scale benefits or synergies to entering new markets.

When entering a market, an IDS has to create new contracts with providers, work with a new employer base, and educate new patients/consumers about the best way to interact with the system. Also, minimum scale needs to be achieved quickly in that new market or it will be expensive to serve. For example, Group Health offers insurance in Spokane, Washington, but does not have critical mass to offer cancer services there. Because Medicare rules stipulate that patients cannot be asked to travel more

than 30 miles for chemotherapy if there is a local provider option, Group Health turns to local providers to deliver these services. But because it does not have critical mass in Spokane, it has none of the benefits in cost of care that it achieves in its primary market. Therefore, on some levels, expansion can be dangerous to the average cost of care within the system. Expansion only makes clear economic sense in cases like Grand Valley, which would build a new health center to serve patients only after several new employers

in that suburb had signed on to long-term customer contracts. Thus, being big does not intrinsically help an IDS enter new markets; the challenges are the same or as difficult as starting a new system from scratch.

It can be seen as either positive or negative that creating *de novo* is no harder than asking Kaiser to come to your state, but it does make clear that those hoping for reform of care delivery in their state should not hang all their hopes on waiting for an expansion to come to them because that is unlikely to happen. We observed intense regionality, where each of these systems seems to have a sizable

or dominant presence in their particular region but fails to spread beyond that. This is a business model that is multifaceted and it is not easy to create a big bang with every expansion. Many said to us, “If Kaiser can’t do it, then nobody can do it.” One journal article that looked at why Kaiser failed in North Carolina² concluded that it tried to be the low-cost player, but then it did not employ its own doctors and so could not really control cost. Any of these integrated delivery systems considering expansion would have to really examine whether they were able to replicate the market conditions necessary for a successful model.

Many integrated systems prefer a “mixed model” to a full integration model and consider their integrated elements to be a test kitchen for innovations.

Very few executives we spoke to believed that their systems would or should evolve to a full integration model like Kaiser’s. In some cases, like HealthPartners and Presbyterian, they explicitly talked about using those patients in the “sweet spot” or the “triangle” (of having health plan membership and using the medical group and the hospital) as the patient population that could be used for piloting and proving new approaches to care or new payment models. In some cases, they felt

they could have a bigger impact on overall costs in their market by rolling out those improvements beyond their own system, and having their care delivery unit partner with other health insurance providers and their health insurance unit partner with other providers and hospitals. Some felt a totally closed system was vulnerable to self-dealing or transfer pricing that lacked transparency. For example, would a health plan cover a very lucrative service only at its own hospital and a less lucrative

service only at a competitor hospital and drive up its operating margin? Some of the health systems said their state regulators and attorney generals were always a little suspicious of integration. Others felt that it could lessen productivity if there were no benchmarks to compete with, or that it could diminish openness to new ideas. For example, in one market, the care providers viewed Blue Cross as being more inventive than the providers' own internal health plan in partnering with them on accountable care models. Others felt that they would have the best control over costs and quality if the whole system was "closed" but that employers and consumers would insist on more optionality.

"...there is not much data available yet on whether ACOs can truly operate as effectively as actual integration does..."

Ultimately, integration is a tool to introduce discipline and alignment on goals into health care delivery. Other tools, such as Accountable Care Organizations (ACO) and bundled payments, which are often talked about separately and have been much discussed in the last few years, are really part of a continuum and could be considered as "other arrows in the quiver" in that they may be able to

introduce that discipline without full integration. If a system has the pieces ready, then this is a time to retain those pieces and move towards optimizing the joint activities and assets. For other health systems that are not integrated yet, they do not have to be fully integrated, they just have to be set up to handle payments as if they were. There are multiple ways to get set up for taking risk payments, which

could include working with a payor (as under an Alternative Quality Contract Blue Cross contract) or potentially working with a large employer (perhaps replicating the way self-insured plans work). While we suspect ACOs can go a long way towards emulating what the most

integrated health systems we saw were already doing, there is not much data available yet on whether ACOs can truly operate as effectively as actual integration does, and this is an important area for further study.

Part III: What we expected but did not find

We expected to see more belief in retail clinics, but even in places that were progressive and supportive of change, not a lot of support was shown for retail clinics.

We rarely saw genuine enthusiasm among any of these health system leaders for the concept of retail clinics. They had a number of different reasons for their lukewarm response. Some places felt that they were already focused on achieving the right care in the most cost-effective setting and offered their own nurse-run, same-day visits (such as Quick Clinic, which is run by HealthPartners within some of their existing clinics). Several systems also felt they could already achieve many of the same goals with their move to create standing order sets and phone and email availability for consultation on minor medical problems. Others felt that going to standalone retail clinics ran the danger of breaking up continuity of care and would rather all patients were under the supervision of care teams equipped with integrated EMR and testing capabilities. Some physician groups felt like their “easy” patients were being cherry-picked, and that a mix of work let them flex to increase time for very sick or complex patients and avoided the stress of all visits becoming back-to-back complex

cases. The economics of retail clinics were also called into question by some health systems who had considered undertaking them. They said that their own analyses had concluded that retail clinics were breakeven, or even a small loss for some other players in the market, but that it was worth it to drive customers into related services like pharmacy or purchases of higher-margin retail goods in the adjoining store. These health system executives were skeptical that health systems should contribute any of their own scarce resources in creating retail clinics without those same follow-on benefits accruing to them or being shared in some way.

We would hypothesize that most of these health systems would feel the same way about high deductible health plans, thought it was not a conversation we had at all sites. Only one health system was actively creating such plans and that health system was less integrated than many of the others we studied. We consider both retail clinics and high deductible health plans to be highly disruptive in our current health care setup, but they

are ultimately point solutions that can be rolled out in isolation successfully. When an integrated system considers a point solution they might find it duplicative or less sensible as an element of the alternative value network that they have created.

Also, the target population of these integrated systems did not include the uninsured, whereas retail clinics and, to some degree, high deductible health

plans, are often addressed to those who cannot afford insurance under the current system. Indigent and uninsured care tends to stress all of these integrated systems, and we project that government is going to have to continue to subsidize such care or a different system will have to figure out how to serve that population effectively.

We expected to see more up-take in customers using price and quality data, but the institutions that published detailed statistics and even prices reported low usage.

Patients and policymakers have long decried how opaque the health care system is. Patients cannot easily compare two knee surgeons by the frequency with which they have performed the procedure, the outcomes and the rates of complications. Nor can patients usually compare the price of having knee surgery in one location over another. Now, some of these health systems, including Presbyterian, Lancaster, and HP, are providing that information after much collaboration with physicians to iron out evaluation systems that they felt were fair. These health systems took into account different levels of patient sickness, expected rates of complications, etc. Both Lancaster and HP went one step further to post prices

for many services and procedures. None of the systems we studied have moved to the type of pricing Geisinger offers with one bundled fee for certain services, especially in the cardiac and orthopedic area, but two of the systems are actively talking about it and preparing to do so in the future.

The big surprise, however, is that based on tracking usage of the quality and pricing data provided on the Internet, very few patients are accessing this information. Slightly higher usage is reported by those who are paying out of pocket. But even then, there is very little change seen in the purchasing behavior of the patient base. Perhaps knowing the prices helps consumers have more time and

support in collecting funds or organizing financing for the service. But why is it not making them switch to a lower priced or higher quality service than the one they intended to use? Perhaps they have the highest level of trust in their doctor or doctor's recommendation for a specialist. Perhaps they do not trust the ratings. Perhaps they are not sufficiently exposed to the financial penalties or rewards of switching to a lower priced service—e.g. if they are only paying 20% of the service, the difference in pricing could be \$1000 rather than \$1500 but they are only paying \$100 less. To the individual, it may not be worth overcoming inertia for that amount, though it drives up the cost to their employer and the aggregate cost of health care. Our conclusion is that we need better shared savings programs that actually include the people making the purchasing decision.

Most policymakers discuss dividing the pie between payors and providers, i.e., that if providers make better

decisions, then they should share in those savings. But so should patients. When Kaiser tried to compete in North Carolina, the patients never got to see any of the savings, so why would they care to pick the low-cost program? New types of shared savings should be inclusive of patients when appropriate.

Even though patients did not seem to be acting on the data made available at some of our study sites, we do know it does change behavior within the health systems themselves. Witness the substantial changes in the New York market when statistics on all heart surgeons became widely released. The desire to compete and to excel can spur real changes in both the quality of health services delivered and, ultimately, cost in terms of avoided readmissions, more acute conditions, etc. But it will take patient engagement to create the next level of change in terms of spurring providers to further focus on quality, and when quality is equivalent, focusing on cost.

We expected to see marked improvements in the health of subpopulations participating in sustained multi-year efforts on wellness and prevention, but this was not the case.

The mission of preventive care is to get closer and closer to those who are well. Integrated systems do this better than

most in terms of having higher levels of participation in preventive testing and visits than traditional FFS medicine.

They also tend to have at least a core of patients who have stayed with the system for a long time, and this investment in prevention benefits them down the road with the avoidance of severe conditions as the members age. Given this, we expected to see large health improvements in those who are managed by an IDS, but this was not necessarily the case. There were lower rates of hospitalization and critical care procedures, but there were not lower rates of obesity, diabetes and high blood pressure, even in subpopulations that had been part of active prevention efforts for over a decade, as in Grand Valley Health System.

The health systems attribute this to several factors. One is that it still requires individual motivation for the patient to recognize what health efforts they can make and also when it is time to seek help. As one executive said, “The system can be integrated and provide the right kind of approach to health care, but if the patient isn’t engaged, nothing else will matter.” Second, as a HealthPartners wellness executive pointed out, “HealthPartners is not in charge of whether the city of Minneapolis builds a walking path when it builds new roads.” This is similarly true for sale of

snack foods in public schools, advertising for fast food, availability of playgrounds, high rates of television watching and sedentary behavior. The health systems most focused on wellness efforts—HP, GH, and GVH—still saw increasing rates of obesity and diabetes in their member populations, though perhaps at a slightly less steep slope.

There were varied amounts of member churn, so not all members had been long-term participants and those conditions could be more ideal, but we still find these results a little discouraging. For example,

“...if the patient isn't engaged, nothing else will matter.”

Grand Valley executives talked to us about possibly shaping wellness programs around the research and theories of Dee Eddington, whose

“zero trends” approach argues that our wellness goals should no longer be built around expecting gains in weight loss or getting other risk factors to improve—our goal should simply be to try to get our risk factors within our control and to not get worse. Eddington’s work suggests we should not keep spending all our resources on those in poor health to lower their risk factors, but instead should focus on those in good health to keep them where they are, and that even that would be a significant win. This, however, flies in

the face of much analysis around health care reform conducted by both policy-makers and businesses that are hoping for significant multi-million-dollar savings in the years ahead from lowering health care expenditures by focusing disease management efforts on risk factors like smoking, alcohol abuse, high blood pressure, cholesterol, and body mass index. We conclude that there is a critical need for increasing public-private partnerships in this area. Excellent integrated delivery systems are still limited in how much they can impact health. Most health systems are built around acute care and cannot address issues that are really of a civic nature. Public health will need to go beyond disease management to health promotion to make real differences in the state of our health and our nation.

Appendix A *Research method, including metrics table of seven candidates: quality, cost, HEDIS*

Research method

The primary objective of this project has been to use disruptive innovation theory to examine integrated fixed-fee providers with the goal of identifying the critical factors necessary to realistically achieve many of the desired improvements outlined by current reform proposals. The first phase of this project involved nationally surveying the field of health systems to map out a spectrum of integration and to identify case study candidates at different points of the spectrum. Note that Kaiser was compelling on a number of different factors, but given the extensive studies already conducted on Kaiser, we felt our resources were better used for less studied subjects. Our case study candidates demonstrate diversity across a number of factors listed below:

- Historical evolution and assembly of component parts of system: whether origins were as a hospital, health plan, or medical group
- Region of the country, urban/rural location, size of market, size of health system
- For-profit, non-profit, cooperative
- Fully integrated, mixed model, or evolving away from integration model
- Performance on cost metrics using Dartmouth Atlas database (Medical care cost equation shows the variation in per-decedent spending for inpatient hospitalizations, physician visits, skilled nursing facility stays, home health agency visits, or hospice admissions, and evaluates the contributions of variation in price and volume in determining Medicare reimbursements. The equation gives the per-decedent rates for reimbursements, volume and price, and gives the ratio to the U.S. average for each component.)
- Performance on quality metrics using CMS Hospital Compare database (the 30-day risk-adjusted death and readmission rates for heart attack, heart failure and pneumonia at different hospitals compared to the United States' national rate)
- Performance on select measures of health plan effectiveness using HEDIS NCQA database (The four measures we selected with the greatest potential to reflect ongoing disruptive innovation include: cholesterol control for diabetics, hypertension control for diabetics (140/90), hypertension control for heart disease patients, and frequency of selected procedures.)

Once we identified health systems to study, the primary research method was case-based investigation to uncover current innovative practices and potential opportunities for disruptive innovation. Interviews were conducted with relevant stakeholders for each health system, including leaders across diverse levels, departments, and functions. Selection criteria for interviews prioritized those with significant tenure so they could speak to the history of how integration was achieved and the key decisions made along the way. Site visits conducted for each case included at least two days of interviews with 15–25 key leaders at the health system, as well as telephone interviews as needed. Relevant accounting and operating data were reviewed using publicly available or audited company sources. Additional third-party sources from medical and lay literature were also used to corroborate statements from the primary sources.

Appendix A continued

Case study subject (Date of site visit)	Performance on quality/cost metrics according to Dartmouth Atlas, CMS, and HEDIS	Other dimensions
HealthPartners (June 2009)	High performer on four key HEDIS measures; no different than U.S. average on all six CMS quality outcome measures; slightly above average in inpatient hospital costs; 30% better than average in physician costs	Non-profit coop that began as a prepaid health plan; medium size city; owns safety net hospital; mixed model of integration includes closed product
Presbyterian Healthcare Services (Nov. 2009)	30% better than average in inpatient costs; 30% better than average in physician costs; average to low performer on four key HEDIS measures; two CMS quality measures better than U.S. average, two measures worse, two measures same as U.S. average	Non-profit that began as a hospital; dominant hospital in city; sizable health plan; no closed product offered
Lancaster General Health (Dec. 2009)	One of only six hospitals in the country that is better than U.S. average on four CMS quality outcome measures and not worse on any measures; costs are at or up to 20% better than national average; no health plan so no HEDIS stats	Non-profit; dominant hospital in smaller city; divested a health plan; committed to clinical integration; community health focus
Group Health (Feb. 2010)	Significantly better than average on two key HEDIS measures; no hospital in system so no applicable CMS or Dartmouth stats	Non-profit coop that began as a prepaid health plan; major city; no longer owns hospitals; large scale, closed model of medical group; offers both open and closed insurance products
Grand Valley Health (May 2010)	Among the best scores in HEDIS in the nation, including on three of our key measures; no hospital in system so no applicable CMS or Dartmouth stats	For-profit; small; began as staff model-HMO; smaller city; never owned hospitals or employed significant numbers of specialists; historically only offered closed product and just beginning to offer "open network" product
Sentara (June 2010)	8–20% better than U.S. average in costs; same as U.S. average on most of the six CMS quality measures at most of its hospitals; average on our four key HEDIS measures	Not-for-profit, major hospital in a smaller city; significant health plan presence; does not offer closed product
Baystate (July 2010)	Better than average on our four key HEDIS measures; costs somewhat higher than average; better than U.S. average on one CMS quality outcome; same as average on other five.	Not-for-profit, major hospital in a smaller city; smaller health plan presence; does not offer closed product

Appendix B Survey instrument on elements of disruptive innovation

How Innosight defines innovation—best practices survey

Below, please find a list of underlying practices often shared by innovative, high-performing health care providers who have achieved impressive results in both quality and cost of delivered care.

Please review each innovative practice below and answer the following two questions by providing *two* numerical ratings for each practice on a scale of “5” (High) to “1” (Low).

- **Importance rating:** How important do you believe this practice is to achieving quality/cost results at your health system?
- **Performance rating:** How successful do you believe your health system has been at implementing this practice?

Innovative practices (examples)	Importance rating	Performance rating
	5 = Very important 4 = Important 3 = Neutral 2 = Not important 1 = Not at all important	5 = Very successful 4 = Successful 3 = Neutral 2 = Not successful 1 = Not at all successful
1. Move standard care to most cost-effective venues (retail clinics, employer sites, e-visits)	A. _____	B. _____
2. Use case management to reduce illness and emergencies (care teams, phone calls as follow up, reduce re-hospitalization through preventive care)	A. _____	B. _____
3. Build connections across continuum of care for better chronic disease management (coordination between PCP and specialist, smooth transitions during hospitalizations)	A. _____	B. _____
4. Allow caregivers to focus more efforts on sicker patients (allot longer visit times to sicker patients, adjust physician productivity measures, use e-visits for less sick)	A. _____	B. _____
5. Ensure everyone practices to top of license (nurses dispense prescriptions; primary care physicians manage chronic disease; allow procedures to be performed by technicians; specialists run solution shops)	A. _____	B. _____
6. Cultivate shared belief in quality guidelines/evidence-based medicine (support researching outcomes, use algorithms to guide care)	A. _____	B. _____
7. Leverage information and decision tools (EMR, eICU, data mining to aid quality improvement)	A. _____	B. _____

Appendix B continued

Innovative practices (examples)	Importance rating	Performance rating
	5 = Very important 4 = Important 3 = Neutral 2 = Not important 1 = Not at all important	5 = Very successful 4 = Successful 3 = Neutral 2 = Not successful 1 = Not at all successful
8. Manage cost of care, not P&L (physicians salaried or paid for lives covered (not fee-for-service), hospital in support of better outcomes that may reduce revenue)	A. _____	B. _____
9. Think of health of populations, rather than individuals (consistent outreach and care provided across patient populations, monitor clinical measures of all diabetics, heart patients)	A. _____	B. _____
10. Engage and incentivize consumers to take health care out of exam room (wellness programs, rewards for maintaining healthy weight or fitness memberships, Web-based disease management, online forums supporting member communities in health goals)	A. _____	B. _____

Appendix C *Additional study possibilities: other integrated delivery systems we considered that were also high quality/low cost*

Kaiser (CA)

Denver Health (CO)

Grand Junction (CO)

Capitol Health Plan, Tallahassee (FL)

HealthFirst (FL)

Medical Associates Health Plan (IA, WI, IL)

Fallon Community Health Plan (MA)

Martin's Point Healthcare (ME)

Health Alliance Plan of Michigan (MI)

Henry Ford (MI)

Saint Mary's HealthFirst (NV)

Paramount ProMedica (OH)

Geisinger (PA)

Scott & White (TX)

Intermountain (UT)

Gundersan Lutheran (WI)

Marshfield Clinic (WI)

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About the case study series

Disruptive innovations in health care have the potential to decrease costs while improving both the quality and accessibility of care. This paper is part of a series of case studies that uses disruptive innovation theory to examine integrated delivery systems and aims to identify the critical factors necessary to achieve many of the desired quality, cost, and access improvements called for in current reform proposals. By providing a historical and strategic analysis of integrated fixed-fee providers, this project hopes to accelerate the adoption of disruptive innovations throughout the health care delivery system.

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About Innosight Institute

Innosight Institute, founded in May 2007, is a 501(c)(3) not-for-profit think tank whose mission is to apply Harvard Business School Professor Clayton Christensen's theories of disruptive innovation to develop and promote solutions to the most vexing problems in the social sector. Innosight Institute's case studies are for illustrative purposes only and do not represent an endorsement by Innosight Institute.

About the author



VINEETA VIJAYARAGHAVAN is a Senior Research Fellow and Project Manager for the Healthcare Practice of Innosight Institute. She previously served as Engagement Manager at the consulting firm Katzenbach Partners, helping Fortune 500 healthcare clients achieve strategic, operating, and organizational improvements. She was also a Research Fellow at Harvard Business School, creating cases and conducting research focused on issues of Organizational Development. She received her M.B.A. from Harvard Business School.

Research team

Greg Beasley

Jason Hwang

Mina Katsis

Ariana Klitzner

Sarah Kwon

Rosie O'Donnell

Special thanks

Clayton M. Christensen

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